

## **VENTILATION IN VENTILATED CLADDING WITH FIBERCEMENTBOARD IS MOST IMPORTANT AND REQUIRE A LOT OF ATTENTION!**

We are familiar with bonding fiber cement board for many years in many countries. Therefore, we are familiar with the specific characteristics of fibre cement board in relation to ventilated cladding systems and the influence of its moisture balance to in relation to the use of fibre cement boards. Concerning fiber cement boards there are some points of interest.

When a façade panel is bonded correctly and professionally with a TWEHA product, it never comes off due to failure of the adhesive.

Like every other installation method knowledge, accuracy and good workmanship is essential for a good result. In this respect it is also worth mentioning that it takes adequate information from the supplier to achieve a good result.

If the ventilation is frustrated, the conditions at the front and behind the façade panel (in the air cavity) differ so much that due to the resulting stress differences in the façade panel it will eventually warp permanently.

This then manifests itself primarily at the corners of the façade panel and leads there to fatal peeling forces on the adhesive (or screwed) connection resulting in failure of one of the substrates.

To what extent does this affect now in the case of a frustrated ventilation? Due to a relatively limited ventilated air gap behind the façade panels, the air in the cavity is less refreshed than the outside air. Consequently, the concentration of CO<sub>2</sub> in the cavity is lower than in the outside air, so that the above-described chemical reaction on the image and cavity side of the plate will not be equal. This is referred to as differential carbonation. Because the façade panel then shrinks sharper than the cavity side, the panel will show curvature.

Due to frustrated ventilation, the air humidity in the cavity, possibly due to temperature differences, will not be equal to the outside air humidity also.

Thus, on the image and cavity side of the panel, there are different climate conditions which make the drying on both sides of the plate uneven. In that case, the dry shrinkage on the driest side, the image side, will be the largest. This will cause the panel to curl also.